MODIS TECHNICAL TEAM MEETING
January 15, 1999

Vince Salomonson chaired the MODIS Technical Team Meeting. Present were Ken Anderson, Bill Barnes, Wayne Esaias, Bruce Guenther, Dorothy Hall, Steve Kempler, Ed Masuoka, Locke Stuart, and Deborah Howard.

1.0 SCHEDULE OF EVENTS

SWAMP Meeting (Boulder)	February 2-3, 1999
Infrared Workshop (Miami)	February 4-5, 1999
SDDT Meeting (GSFC)	February 10, 1999
Reflective Solar Bands Workshop (GSFC) Building 32, Room E103/E109	February 11-12, 1999
Next MODIS Science Team Meeting	April or May 1999 (TBD)

2.0 MINUTES OF THE MEETING

2.1 Introduction

Vince Salomonson noted that it is exactly 6 months until the July 15 launch date for EOS-AM1.

2.2 Instrument Report

Ken Anderson discussed the Valley Forge test. He expressed some doubts about the feasibility of getting down to .5% accuracy within the short timeline, although he said getting within a few percent error is highly likely. Anderson reported that the conceptual study about what can be gained at Valley Forge without removing the instrument from the spacecraft will probably be completed by the end of January.

Anderson reported continuing to troubleshoot the FM1 problems encountered at thermal vac. Some data are clearly noise related, however, identifying the source and correcting the noise is going very slowly. Anderson attended a meeting this morning on the red and yellow operational limits for the instrument.

A discussion followed about closing or leaving open the NAD and the Space View Door (SVD) during survival mode. Guenther mentioned that it had not yet been decided whether these doors would be left open or not. Anderson suggested that this is an operational issue. Guenther said that the design is to close the doors even when going to safe mode, which happens approximately six times throughout the mission. For now, the NAD and SVD will be left open during safe mode. The Solar Diffuser Door (SDD) can open and close many times. However, once the other two doors (NAD and SVD) are opened and closed, they might not open a second time. Anderson explained

that sunlight shining on the cooler door or the scan mirror could potentially damage the instrument. The technical team discussed whether it is a greater risk to leave the doors open and risk solar radiation overheating the instrument or to close the doors and not be able to get them reopened. Guenther noted that this is harder to decide for survival mode than for safe mode. Salomonson asked about fail safes if the doors do not open and a technical team member replied that MODIS has fail safes and a fail safe backup. Anderson noted that a problem can occur if the spacecraft rotates so that the SVD faces the sun. Salomonson asked about the consequences if the SVD is locked shut. Anderson replied that MODIS would lose all thermal bands and the space view.

2.3 MCST Report

Bruce Guenther summarized the schedule of meetings that he plans to attend through early February. He has been invited to talk about MODIS calibration at a NOAA R&D council meeting on Tuesday, January 19. Following the SWAMP meeting in Boulder on February 2-3, Guenther plans to attend an Infrared Workshop in Miami on February 4-5. On February 11-12, MCST has a Reflective Solar Bands workshop at GSFC. MCST will brief the Science team on the algorithm and any related calibration issues at that workshop. The next Science Discipline Data Team (SDDT) meeting is on February 10. The Reflective Solar Bands workshop was scheduled on February 11-12 so people conveniently can attend both meetings.

2.4 Snow Mapping

Per a request from Salomonson, Dorothy Hall agreed to review a manuscript on AVHRR-TM instruments viewing glaciers. Hall said she had attended a snow mapping seminar at NOAA on January 14. She reported that NOAA has a daily rather than a weekly product with a 25 kilometer resolution for the Northern Hemisphere. They use GOES data, some SSM/I data, and ground station data to develop their snow maps. NOAA plans to automate their snow mapping so they can use satellite data rather than relying on station data. Salomonson asked about an objective in the original proposal to look at the combination of AMSR and MODIS data. Hall replied that her group is working on it and that Andrew Tait is working on combining SSM/I (because he does not yet have AMSR data) and MODIS data to develop an algorithm that will map snow cover.

Salomonson asked whether NOAA uses a snow cover map that accounts for clouds. Hall replied that although NOAA still has problems with clouds, they are improving these products and want to use MODIS data and MODIS products when they become available. Salomonson inquired about NOAA-K data. Hall commented that there is not very much light at the 7:30 a.m. overpass time scheduled for February. She said that NOAA may do the test later than February or March when there will be more daylight. Salomonson commented that there should be snow in the Andes in Chile, Peru, or Brazil. Hall said that NOAA prefers and plans to use North American sites. If they can get enough daylight, then her group will use the NOAA sites. Hall mentioned that she is going to meet with Jim Foster and Al Chang next week to plan for field measurements in February.

2.5 SDST Report

Ed Masuoka discussed highlights from the V2 Science Software Integration and Test (SSI&T) Schedule (Attachment 1). He pointed out that PGEs currently running in the MODAPS system are indicated in the last column on Attachment 1. Masuoka stated that with the help of the Oceans group and Eric Vermote, discrepancies in the synthetic data have been resolved. Masuoka plans to update the SSI&T Schedule to reflect what is going into MODAPS, when it was delivered, and what is not yet in MODAPS. He reported that PGE06 passed all its tests. The scripts that are required to run it in MODAPS are being written, so the atmospheres Level 2 should be running in MODAPS by January 23. The 8-day Land and Oceans products are scheduled next.

Salomonson asked about the reprocessing ratio. Masuoka replied that reprocessing is 1x of processing in every year until 2003 or 2002. Then it will go up to 2x of processing. It only will go up to 3x for AM and for PM because a processor is added to it. Masuoka said the reprocessing ratio is at .5 x for launch, with better or worse than .5x according to the effectiveness of the algorithms for processing.

2.6 GDAAC Notes

Steve Kempler briefly talked about GDAAC notes (Attachment 2). He said that the current run is up to 8 hours from 4 hours last week. Several months ago it took an hour to run 15 minutes of data. When it is up to 24 hours at a time performance will improve.

Salomonson asked about labeling the data according to the day. Esaias commented that a granule day is numbered by the location of the satellite. Salomonson then asked if MODIS will be able to disseminate an image of North America. Masuoka replied that it will be possible to view North America in visible and band 26 and to produce a picture. Esaias commented that similarly, the Oceans group can use thermal IR and fluorescence (a new Oceans product).

Kempler reported that testing is in progress and there is a processing schedule for integrated data. However, there is more work to be done for real end data regarding the SIPS Interface. A meeting about that is scheduled for Tuesday, January 19. Kempler added that a MODIS support team is being put together at the DAAC, according to disciplines. Masuoka asked about MODIS swaths and creating a Level 1B image of the world. Kempler added that Yoram Kaufman also had asked for these.

2.7 MAST Report

Locke Stuart reported that some technical team members have suggested developing a MODIS newsletter. Barbara Conboy forwarded a sample copy of the SAGE III newsletter that she received from Michael King to technical team members. Salomonson advised focusing on keeping the MODIS homepage and links up to date and adding highlights of science and technical team meeting minutes to the MODIS Web site. Those present agreed upon the need for a weekly Web page, including "hot items;" weekly progress; links to various MODIS-related sites; and science, instrument,

and support team reports. Masuoka recommended including sample products. Esaias suggested including surrogate products so people can practice using them.

Stuart shared a suggestion by Justice to make space available (about 1000 square feet) for a science enclave as the launch date approaches. Salomonson asked who would use the space. Masuoka replied that it would be for the Land team and LDOPE group to work during the 6 months after launch. Stuart added that it would be a team leader computer facility and include space for guest investigators. Salomonson asked whether the need for such space is a Land team phenomenon. Masuoka replied that the Oceans Discipline group and MCST also need such space.

The group discussed scheduling for the next MODIS Science Team meeting. An April or May date was suggested; the third week of April seemed good to many of those present. The week of May 17 and the last week of April did not seem good. Stuart commented that MODIS is planning an earlier than usual date for the Science Team meeting because a June date would be too close to the July launch date. He suggested incorporating a tour of MODAPS into the next Science team meeting. Masuoka said that MODAPS should be running in April.

A brief discussion followed about obtaining invitations to attend the July 15 launch. Stuart said he will ask Conboy to work with Murphy on a launch invitation list.

3.0 ACTION ITEMS

3.1 New Action Items

1. Conboy and Howard: Plan for the next MODIS Science Team meeting in April or May.

2. Conboy: Work with Murphy on a launch invitation list; invite PAO to participate.

3. Conboy, Howard, and Ward: Develop a weekly MODIS news page linked to the MODIS Home Web site. It should include hot items and reflect weekly progress

3.2 Action Items Carried Forward

1. Murphy: Schedule Kirsten Parker to review an earlier operations presentation for the Technical Team before the SWAMP meeting.

Status: This item remains open.

2. Evans and Eicorn: Look into what can be done at Valley Forge without taking the instrument off the spacecraft.

Status: This item remains open.

3. Townshend: Prepare for getting the official word on the launch date.

Status: This item remains open.

4. Fleig: Follow up on the status of the PI Processing working agreement with ESDIS.

Status: This item remains open.

5. Murphy: Investigate the status of direct broadcast and present an update to the Technical Team.

Status: This item remains open.

6. Murphy: Coordinate a MODIS approach for radiance-to-brightness temperature conversions.

Status: This action remains open.

7. Masuoka: Submit an EOS-PM Data Product Update to ESDIS.

Status: This action item remains open.

8. Masuoka: Distribute an e-mail message summarizing the status of production rules at ECS.

Status: This material was presented at the last Science Team meeting (June 24-26). Masuoka will update this information and pass it along to the discipline group leaders.

9. Murphy: Speak to MCST and the discipline group leaders about what to include in a Version 2.1.1 Level 1B delivery.

Status: This item remains open.

10. Masuoka: Examine status of DAO ancillary products for MODIS.

Status: This item remains open.

3.1 Closed Action Items

1. Guenther: Deliver a schedule for an earlier date on Level 1 code. In addition work on, if possible, a more modularized version of the Level 1B code to minimize any problems from forthcoming software changes.

Status: This item is closed. Guenther provided this schedule to an early January premeeting to the SDDT meeting held on January 13.